

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (original) A device for measuring the intensity (I) of a strong current passing through a wire (1), comprising a magnetic sensor (2) in the form of a loop surrounding the wire (1), and a turn (3) of conductive material surrounding the wire (1), conducting a high-frequency counter-current, the intensity of which is adjusted to cancel the magnetic field (H), characterized in that the turn (3) of conductive material is in short circuit and surrounds the magnetic sensor (2).
2. (original) The device as claimed in claim 1, characterized in that the turn (3) of conductive material in short circuit is a closed turn.
3. (currently amended) The device as claimed in claim 1 ~~one of claims 1 or 2~~, characterized in that the resistance R of the turn (3) of conductive material in short circuit is adjusted to obtain an L/R filtering constant, L being the inductance of the turn (3).
4. (currently amended) The device as claimed in claim 2 ~~one of claims 2 or 3~~, characterized in that the turn (3) is made of soft iron (4).
5. (original) The device as claimed in claim 4, characterized in that the turn (3) of soft iron (4) is surrounded externally by a copper jacket (5).

6. (currently amended) The device as claimed in claim 2 ~~one of claims 2 to 5~~, characterized in that the turn (3) includes, internally, a channel (6) concentric with the torus of the turn, containing the magnetic sensor (2).
7. (original) The device as claimed in claim 6, characterized in that the magnetic sensor (2) is a wire (7) of nickel-iron alloy forming a closed loop and surrounded around its entire circumference by a coil (8) that is formed by helical turns.
8. (new) The device as claimed in claim 2, characterized in that the resistance  $R$  of the turn (3) of conductive material in short circuit is adjusted to obtain an  $L/R$  filtering constant,  $L$  being the inductance of the turn (3).
9. (new) The device as claimed in claim 3, characterized in that the turn (3) is made of soft iron (4).
10. (new) The device as claimed in claim 3, characterized in that the turn (3) includes, internally, a channel (6) concentric with the torus of the turn, containing the magnetic sensor (2).
11. (new) The device as claimed in claim 4, characterized in that the turn (3) includes, internally, a channel (6) concentric with the torus of the turn, containing the magnetic sensor (2).
12. (new) The device as claimed in claim 5, characterized in that the turn (3) includes, internally, a channel (6)

concentric with the torus of the turn, containing the magnetic sensor (2).